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The origin of money from the money-debt approach

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Abstract. There are two fundamental approaches to the nature and origin of money that are incompatible with each other: money-commodity and money-debt. The first one has occupied a hegemonic position in the academy —and so outside it— throughout history. On the other hand, the money-debt approach was developed in response to the conventional view, although it currently occupies a marginal place in the academic sphere and is barely known beyond it.

Despite its low popularity, the unorthodox outlook of money-debt is much more useful in order to understand the origin and nature of money; and represents a much more accurate analytical framework to monetary phenomena. In this paper a detailed review of the origin of money from this less-known approach is made in order to demonstrate its analytical superiority against the hegemonic approach that suffers from significant theoretical inconsistencies and a lack of empirical support.

Keywords: origin of money, commodity, debt, theoretical approach.

JEL: N10, E42, E51

[es] El origen del dinero desde un enfoque de dinero-deuda

Resumen. Existen dos enfoques fundamentales sobre el concepto y el origen del dinero que por su propia naturaleza son incompatibles entre sí: el que concibe el dinero como una mercancía —dinero-mercancía— y el que lo hace como una relación social —dinero-deuda—. El primero bebe de los planteamientos que ya utilizó Aristóteles en los tiempos de la Grecia clásica, aunque ha sido desarrollado y refinado en tiempos más recientes por varios economistas reconocidos como Carl Menger y Paul Samuelson, y a lo largo de la historia ha ocupado una situación hegemónica en la academia —y también fuera de ella—. En cambio, el enfoque del dinero-deuda fue desarrollado especialmente a finales del siglo XIX y principios del XX como respuesta a la visión convencional, aunque actualmente ocupa una posición marginal en el ámbito académico y apenas es conocido más allá de él.

A pesar de su poca popularidad, el enfoque heterodoxo del dinero-deuda resulta mucho más útil para entender el origen y la naturaleza del dinero, conformando por lo tanto un marco analítico mucho más preciso y ajustado a los fenómenos monetarios. En este trabajo se hace un una revisión detallada del origen del dinero a partir de este enfoque menos conocido para poner en evidencia su superioridad analítica frente a un enfoque que, aunque es absolutamente hegemónico, adolece de importantes inconsistencias teóricas y de una notable falta de respaldo empírico.

Palabras clave: origen del dinero, mercancía, deuda, enfoque analítico.

JEL: N10, E42, E51

Sumario: 1. Introduction. 2. Orthodox approach: money-commodity. 3. The money-debt approach as a critique of the money-commodity approach. 4. Credits and debts. 5. Primitive money. 6. Money in class society. 7. Temples and palaces in Mesopotamia. 8. Silver. 9. General-purpose money. 10. Conclusions. Bibliography.

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1. Introduction

There are two fundamental approaches to the concept and origin of money which by their very nature are incompatible with each other: that one which conceives money as a commodity —money-commodity— and that other one which conceives it as a social relation —money-debt— (Ellis 1934, 3). While the first one is hegemonic in the academy —and so outside it—, the other one is marginal. However, in this paper it is considered that the hegemonic theoretical focus is not useful to understand the origin and nature of money nor, wherefore, to explain economic reality. Furthermore, and despite its low popularity, the heterodox approach of money-debt offers a much more precise analytical framework adjusted to the emergence and nature of money and, therefore, to monetary and economic phenomena. The goal of this paper is to present in a detailed way the heterodox vision of the origin and nature of money, so that the reader can know its virtues and defects, as well as compare it with the traditional vision.

In the first place, how the appearance of money is interpreted from the dominant approach is briefly explained to, hereunder, carry out a detailed review of the same phenomenon based on the debt-money approach. This review has a structure fundamentally chronological, so that, after a brief reflection on the nature of money, the historical events that led human societies to use money in their relationships and economic activities are recounted, as well as how this use evolved over time. All of this will help to present as a conclusion the major differences that exist between the two points of view when analysing money and its origin.

2. Orthodox approach: money-commodity

This approach draws on the views already shared by Aristotle in the times of classical Greece, and more recently has been developed and refined by several well-known economists such as Carl Menger and Paul Samuelson[2].

From this perspective it is considered that in the early years of human civilization the most common and widespread mechanism to carry out economic transactions was barter: the exchange at the same time of one product by another. In this way, a blacksmith could, for example, deliver nails to a fisherman in exchange for a piece of fish. However, as commercial exchanges became more complex due to civilizational development, barter began to be an uncomfortable and inefficient practice. On one hand, it was difficult to transfer certain quantities of heavy and bulky products to the places where exchanges used to take place, as well as it was to measure and separate them in order to achieve the specific quantity that would be comparable to the products to receive in exchange. On the other hand, it was not easy to find someone who, at the same time, demanded the commodity that oneself had and disposed of whatever oneself wanted in return. In addition, knowing the equivalent prices among all the goods exchanged was almost impossible because the combinations were very numerous and because these relative prices varied constantly (Smith 1994, 57-7; Glyn 1994, 15; Ingham 2004b, 22; Samuelson and Nordhaus 1975, 274-76).

To solve all these difficulties in a completely decentralized and unplanned way, money arose. One specific commodity that would serve as a general equivalent among all other products and that thanks to its nature´s properties would facilitate and economize economic transactions on account of its lower weight and greater ease to be carried, divided and stored. The first assets that were used as money were cattle, iron, salt, shells, salt-cured cod, skins, grain, sugar, tobacco, nails, etc. Progressively and through a natural evolutive process driven by market forces, precious metals like silver and gold, displaying much more suitable features to become money-commodity[3], were imposed. Thus, money would be nothing more than a neutral tool used to facilitate commercial exchanges (Smith 1994, 57-7; Menger 1892, 12; Harari 2015, 200; Innes 1913, 377; Tooke 1844, 4-5).

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[2] For a detailed development of the money-commodity approach see Menger (1982); Smithin (2000), Kiyotaki and Wright (1989) and Desan (2013).

[3] These characteristics, according to Jevons, are: previous utility, portability, indestructibility, homogeneity, divisibility, stability of value and know-how (Jevons 1986, 30-40).

From this point of view, money is fundamentally defined by its function as a medium of exchange —the asset used as money serves to obtain any other product—, leaving in a second place its other functions as method of payment —the merchandise can be used to pay off debts or to pay taxes—, as deposit value —people can store that merchandise for a period of time with the purpose of conserving their purchasing power, since in the future they can use it to acquire other products, pay taxes or settle debts— and as a unit of measure —the merchandise is used to account for prices, taxes, economic values, debts, etc. (Wray 2015, 259).

Due to the enormous potential that this commodity acquired in the market, governments devoted enormous efforts to take control of it and to regulate its use to the point of becoming monopolists of its manufacture. In order to do so they created pieces of this metal with a certain shape in which they stamped their power symbol, chasing and sanctioning any other type of forging. This way they made sure that their currencies were the only ones allowed in economic transactions, thus monopolizing under unfair competition to create money (Innes 1913, 377; Wray 2010, 32).

Finally, in order to save on the quantity of metal used and to avoid its constant transportation, a new mechanism called "credit" began to be used in more recent times. This credit became simply a promise to pay money that under favourable circumstances would have the same value as the actual money and which was expressed in the form of bills, checks and even electronic notes. If money had arisen to avoid the uncomfortable use of heavy and bulky materials, credit had arisen to avoid the uncomfortable use of metallic coins (Innes 1913, 377; Klein and Selgin 2000; Friedman 1969).

3. The money-debt approach as a critique of the money-commodity approach

The first traces of this theoretical approach date from the 15th century and reveal that, at that time, alternatives to Aristotle's dominant conception of money as a commodity were already being considered. But it was not until the end of the 19th century and beginning of the 20th century that the credit-money approach underwent a much more complete theoretical development and introduced itself as a serious alternative to the dominant vision. Within the intellectual debate that took place in the 1890s, which was called "*Methodenstreit*"[4], a view of money opposed to the hegemonic one —at the time championed by the Austrian Carl Menger— was defended by the authors of the German Historical School with Gustav von Schmoller at the head (Bell 2001, 151; Ingham 2004b, 18-24).

One of the main drivers of this non-orthodox approach was Mitchell Innes, who in his essay "What is Money?" bluntly stated the following about the commodity-money approach: "it may be said without exaggeration that no scientific theory has ever been put forward which was more completely lacking in foundation" (Innes 1913, 383). This fierce criticism is since although the money-commodity approach, settled on logical reasoning[5], can seem quite intuitive, not only it is full of theoretical inconsistencies, but it also goes against the available empirical findings (Hudson 2004, 120; Wray 2010, 40).

Among the theoretical inconsistencies it highlights the seemingly strange fact that the sole market forces and the rational behaviour of its participants lead to a decentralized way for hundreds of thousands of people scattered across vast territories and in different communities to agree to use the same means of exchange and the same unit of account for hundreds of different products (Gardiner 2004; Ingham 2004; Desan 2013). In short, and in the words of Wray and Tymoigne (2005, 4), "Orthodoxy has never been able to explain how individual utility maximizers settled on a single numeraire".

Besides that, there is an important theoretical contradiction in the money-commodity approach when considering money only as a trace of the transactions of products when at the same time it is recognized that it fulfils other functions —although they are consid-

[4] For a discussion on this debate consult Louzek (2011).

[5] In fact, as Wray (2010, 30) reminds us, Samuelson himself recognized that the well-known story of the emergence of money was "hypothetical and logical" (Samuelson and Nordhaus 1976, 274-76).

ered secondary— as deposit of value, unit of account and means of payment. If a particular commodity serves to treasure wealth, to measure economic value and to pay taxes and settle debts, it seems difficult to think that it is limited to be a simple neutral instrument without implications for economic dynamics (Ingham 2004b, 19; Tcherneva, 2016, 2).

Another logical inconsistency lies upon assuming that back in those days some basic product worked as means of exchange since that would imply that such a product would be equally affordable for all the members of the community, including the producers of that particular good: "if the fishers paid for their supplies in cod, the traders would equally have to pay for their cod in cod, an obvious absurdity" (Innes 1913, 378).

Regarding the lack of support for empirical evidence, it is pointed out that an appropriate analysis of archaeological remains, cuneiform writing and numismatic studies would give life and strength to the money-debt approach as opposed to the money-commodity approach. One of the most reputable anthropologists, Caroline Humphrey, put it this way: "no example of a barter economy, pure and simple, has ever been described, let alone the emergence from it of money; all available ethnography suggests that there never has been such a thing" (Humphrey 1985, 48). Although it is not denied that barter took place in primitive societies, it is nuanced that it took place for ceremonial exchanges and it did not play a decisive role in day-to-day activities. As Graeber (2011, 32) explains: "What all such cases of trade through barter have in common is that they are meetings with strangers who will, likely as not, never meet again, and with whom one certainly will not enter into any ongoing relations". Polanyi (1957) also points that barter took form as individual acts that do not necessarily lead to markets in societies where other forms prevail. This is suggested by the fact that the study of hundreds of archaeological sites has not allowed the identification of any physical space in which the exchanges of the in the primitive settlements supposedly took place (Wray 2010, 39; Graeber 2011b).

On the other hand, there is ample empirical evidence which shows that credit —a much more efficient mechanism than using means of exchange— existed thousands of years before the use of precious metals as means of exchange (Wray 2010, 40; Innes 1913, 396). Even one of the extreme defenders of the money-commodity approach admitted this fact without being fully aware of it, as Rallo (2017, 42) reminds us: "Menger himself [...] recognized that, before money even of spot barter, there already existed unilateral obligations among the members of a community, which [...] were clear cases of pre-monetary credit/debt".

The key of vault of the differences between both perspectives, which explains their total incompatibility, is that the heterodox view holds that the use of money does not require the presence of any merchandise or any physical element, since money is nothing more than a unit of measurement, an abstract concept created by the human being that cannot be perceived with the senses: "Money [...] was a purely mental revolution. It involved the creation of a new intersubjective reality that only exists in the shared imagination of the people [...]. Money is not a material reality: it is a psychological construct" (Harari 2015, 200-3).

Although from the money-commodity approach it can be agreed that money is an invention of human being, the important thing is that while its defenders emphasize that this invention consisted in socially agreeing that a particular commodity served as a medium of general exchange, the promoters of the money-debt approach emphasize that there is no need to use physical or tangible products since money is a fiction that is created and kept apart from any material reality, only thanks to the imagination of people. This fiction can then be represented somehow in a physical object to facilitate its management, but it is unnecessary to explain its existence and its implications.

The same happens with any other type of unit of measurement invented by the human being: distance, volume or weight are fictions devised by humans that have no material reality, but for whose measurement tangible objects can be used —such as tape measures, marked volumes, scales, etc. In the case of the magnitude that is measured with money, shells, metal coins, gold bars, banknotes, etc. can be used. But the existence of these physical tools does not define the essence of money, just as the existence of metric tapes does not define the essence of distance. The money-commodity approach confuses the concept of money as a unit of measure with the material thing that can be used for its measurement (Ingham 2004, 176; Wray 2015, 267). However, in the words of Innes (1914, 155):

> The theory of an abstract standard is not so extraordinary as it first appears, and it presents no difficulty to those scientific men with whom I have discussed the theory. All our measures are the same. No one has ever seen on ounce or a foot or an hour. A foot is the distance between two fixed points, but neither the distance nor the points have a corporeal existence. We divide, as it were, infinite distance or space into arbitrary parts, and devise more or less accurate implements for measuring such parts when applied to things having a corporeal existence.

This vision, as it has been pointed out, is based on considerations outlined many centuries ago. The authors Carruthers and Babb studied the debate between the Bullionists and the Greenbackers on the nature of money after the American Civil War and in their study can be read how the latter were aware of the fact that the object used to measure was not what it was actually relevant: "True money is not wealth any more than the deed for a farm is the farm itself; and there is no more use in having our money made of gold than in having our deeds drawn upon sheets of gold" (Carruthers and Babb 1996, 1569-70). But if, according to this interpretation, money is a unit of measure, what exactly does it measure?

4. Credits and debts

Money is an abstract unit of measurement created by human beings to measure commitments and obligations (Fontana and Realfonzo 2005, 6; Ingham 2004b, 25). Money is not any commodity; it is "simply a non-tangible abstract unit in which obligations are created and discharged" (Henry 2004, 93). These obligations or commitments always involve two agents who are connected by a direct link that turns one of them into a creditor and the other into a debtor: "[Credit] is simply the correlative of debt. What A owes to B is A's debt to B and B's credit on A. A is B's debtor and B is A's creditor. The words "credit" and "debt" express a legal relationship between two parties, and they express the same legal relationship seen from two opposite sides" (Innes 1913, 392).

In this social relationship, one of the parties gives value and the other receives it. The party that gives value is the creditor, because the fact of giving value has conferred the right to receive the equivalent at some point in the future. The party that receives value is the debtor, by the fact that receiving value has conferred the obligation to give the equivalent at some point in the future (Graziani 2003, 59; Gardiner 2004, 149). For example, when the blacksmith delivers nails to the fisherman, he becomes the creditor of the fisherman, who is now debtor of the blacksmith. At some point in the future the fisherman will have to pay off his debt by giving the blacksmith an equivalent value. This may be by handing him a piece of fish or by carrying out any activity that the nail manufacturer values. What works as money is credit, not any commodity (Macleod 1889, 72).

Innes (1914, 155) explained it quite clearly as follows:

> The eye has never seen, nor the hand touched a dollar. All that we can touch or see is a promise to pay or satisfy a debt due for an amount called a dollar. […] What is stamped on the face of a coin or printed on the face of a note matters not at all; what does matter, and this is the only thing that matters is: What is the obligation which the issuer of that coin or note really undertakes, and is he able to fulfil that promise, whatever it may be? […]
>
> Credit and debt are abstract ideas, and we could not, if we would, measure them by the standard of any tangible thing. We divide, as it were, infinite credit and debt into arbitrary parts called a dollar or a pound […]

The anthropologist David Graeber emphasizes that the transactions that occurred in the early days of the human being took place through this recognition of credits and debts, and rarely through barter: "Obviously what would really happen, and this is what anthropologists observe when neighbors do engage in something like exchange with each other, if you want your neighbor's cow, you'd say, "wow, nice cow" and he'd say "you like it? Take it!" —and now you owe him one. Quite often people don't even engage in exchange at all" (Graeber 2011).

Due to its very nature, this recognition of credits and debts is a much more useful and efficient tool for carrying out transactions than barter or the use of commodity money. In fact, Gardiner (2004, 30) assures that it is unlikely to think that barter was used in a generalized way because it presented many inconveniences that, by the way, were easily solved

through the use of credit. The first of these was the already mentioned, unlikely fact that the coincidence of needs and availability of products occurred at the same moment, something that is perfectly resolved with the use of credit —because you can settle the debt at a future time. The second one was the most important, and it made reference to the fact that most productive activities involve a sequence of stages from the transformation of the first raw material to the sale of the finished product. Which makes the person who produces the final good to do not have anything to offer to the producer of the raw material until the end of the process. That is why it used to happen that the producer of the final good provided a credit to the producer of the raw material in exchange for it, that is, he promised to provide value at a future time. The example that Gardiner accompanies (2004, 131) to his explanation is quite clarifying in this regard:

> Let us assume that the huntsman is in need of a supply of arrows, but until he can hunt, he has nothing to give in exchange. So, he promises the fletcher ten haunches of venison in exchange for a supply of arrows. In modern terminology he is asking for 'trade credit'.

Credit, precisely because it has no corporeal existence, is the most efficient mechanism to carry out exchanges —much more than any commodity— and, it is also, and above all, the most valuable type of property. After all, credit has no weight, it does not occupy space, it can be easily transferred to another agent, it can be more easily protected against any physical threat such as destruction or theft, and it is imperishable (Innes 1913, 392; Wray 2010, 40; Gardiner 2004, 30).

As it can be seen, this line of thought emphasizes the function of money as a unit of account —economic values are measured as a duty—, leaving the rest of the functions in a second place —means of exchange, means of payment and deposit of value. Given that money is used to measure commitments and obligations —credits and debts— between people, it can exist outside of spaces in which exchanges take place, something totally unthinkable according to the money-commodity approach. In fact, money as a unit of account predates exchange since the first appearance of money took place in primitive hunter-gatherer societies in which there were no markets at all or anything like it (Parguez and Seccareccia 2000, 101; Ingham 2004b, 25; Lavoie et al. 2009, 142; Wray 2012, 6; Wray 2004, 225).

5. Primitive money

When addressing the origin of money it is necessary to make an important point: nowadays we do not have a particular way of knowing when or under what circumstances the use of money began, since this event dates from a prehistoric era before writing and there are no records that allow us to scrutinize the past with precision. As pointed out by Keynes (1930, 13): "the origins of money are lost in the mists of time". Hence, we should be aware of the limits of our analysis and very cautious with the available evidence (Grierson 1977, 12; Eagleton and Williams, 2007, 10; Mitchell et al 2016, 44).

Notwithstanding the foregoing, if we consider that money is fiction that serves to measure obligations, we can be sure that the first type of money that was created was not used to facilitate the exchange of products, but to articulate social relations through the measurement of engagements regulated and controlled by a higher authority in the context of primitive societies. In these tribal communities, obligations were generated to regulate events such as marriage, murder, maturity, fatherhood, fighting, etc. with the goal of maintaining social cohesion, peace and justice. After all, money, understood as a unit of account of obligations, appeared as an institutionalized practice within the framework of a system of pre-legislative obligations for the benefit of the interests of the community. These imposed obligations were personal and those affected were thus forced to perform certain actions or suffer certain punishments, which could be quantitative —deliver several objects, for example— or qualitative —dance, mourn, lose a social status, etc.—. That is, money was not emerged from a pre-monetary market system but from the penal system (Polanyi 1957, 1181-2, 198; Wray 2012, 6; Wray 2004, 242; Grierson 1977; Goodhart 1998).

One type of penal system applied by these primitive societies and of which we have enough evidence is the Wergeld system, based on the reparation of the victim or of his family —who became creditor— on the part of the guilty person —who became debtor. It was

considered desirable that the guilty party was obliged to provide value to the victim's family in order to avoid a revenge that will make the situation even worse. And until the perpetrator did so, he would remain indebted (Hudson 2004, 99, Wray 2004, 227). Hence, the process of enforcement of the penalty equals "pacifying", which is the etymological root of the word "pay". If the culprit was condemned to deliver a head of cattle to the victim, in doing so he would pay off his debt and pacify the conflict. It is no coincidence that words for debt in almost all languages are synonymous with "sin" or "guilt" (Hudson 2004, 99-102).

The fines or corresponding payments were made directly to the victims or to their families, not to public institutions. There were extensive lists of transgressions and fines for each transgression and, in general, these payments involved living and animated merchandise such as livestock or house maids (Wray 2004, 9, 227). As discussed above, even one of the best-known exponents of the money-commodity approach, Carl Menger, was fully aware of the existence of these criminal systems —although he did not link them to the nature of money—: "Long before barter appeared in history, or acquired a decisive importance to obtain goods, we already find several forms of unilateral obligations: voluntary donations or under more or less coercive pressure, taxes imposed forcibly, punishments of a patrimonial nature, the Wergeld, unilateral obligations derived from family relations, etc." (Menger 1909, 143).

Wergeld was the price that had to be paid for hurting or murdering someone, so value and Wergeld were interchangeable terms. Interestingly, money started as a substitute for life (Grierson 1977, 33; Graeber 2014, 172-176). This system expressed two fundamental elements of the social structure: "the utilitarian and the moral evaluation of social roles and positions. The indemnity schemes of the wergild aimed to compensate for functional impairment, but also expressed society's normative order" (Ingham 2004, 183).

This normative order was inextricably linked to spiritual, magical, and, after all, religious beliefs. Obligations were not only of an institutional nature, but they also were a sacred penance, and those affected had to fulfil them if they did not want to be punished by divine forces beyond the punishment imposed by the tribal authority. Debts and religion have always gone hand in hand; the origin of money cannot be understood aside from the religious beliefs (Henry 2004, 89). That is why many of the words associated with money and debt have religious meanings, such as sin, retribution, redemption, "erasure and new account", Jubilee Year... In fact, in Aramaic, the language spoken by Jesus of Nazareth, the word used for "debt" is the same one as that one used for "sin"; and Christ is known as the Redeemer and the perpetrator, the one who steps forward to settle the debts that we cannot redeem (Wray 2015, 151-2). Moreover, in the Bible it can be stated that the original Our Father prayed "Forgive us our debts as we also forgive our debtors"[6] (Mt 6: 9-13).

But the money-debt that was used in the primitive communities underwent a very important transformation as societies became more complex. Specifically, it was the emergence of class society what marked the transition from a kind of money that served as a unit of account of marginal obligations to the sort of money that would begin to take up many more spaces of social life.

6. Money in class society

From the money-debt approach, money is considered a social relationship that establishes commitments and obligations, and this necessarily implies talking about some underlying inequality. After all, the link between a creditor and a debtor is not, by nature, horizontal but vertical, since the latter must provide value to the former. Consequently, the creditor holds a position of power against the debtor. Without this hierarchical link between them, there would be no social reason to comply with these obligations or any other mechanism to enforce the payment owed (Henry 2004, 79).

In primitive societies it is natural that these vertical obligations only take a marginal place, since these communities were characterized by the absence of hierarchical links. The obligations were reserved only for those special and

[6] After a request by Pope John Paul II for the text to be homogenized in all regions, the phrase became as follows: "Forgive us our trespasses as we forgive those who trespass against us".

isolated cases in which peace and social harmony were being put at risk. For the rest of activities and relationships it did not make sense to use the imposition of obligations because in them predominated the principles of reciprocity and altruism (Henry 2004, 84; Mitchell et al 2016, 45).

In tribal societies, the rule of hospitality derived from common property prevailed: "all had a right to subsistence that was collectively produced by its members on collectively held means of production" (Henry 2004, 83). The exchanges of products followed the logic of reciprocity, mutual aid and gifts. With the delivery of an object or the provision of a service nothing was expected in return, since the welfare of each individual was comparable to the group welfare. Precisely for this reason, there was no need for a part of the society to follow-up with what is owed to someone or who owes it (Henry 2004, 93; Polanyi 1957). In fact, the value that was given to sharing the goods was so strong that they had no words to express the gratitude nor to indicate the satisfaction of receiving something from the hand of someone. Moreover, giving thanks could even be offensive by indicating a lack of trust and fraternity (Garrote 2017, 23; Kottak 1994, 176).

For this very reason the barter did not make any sense in communities of these characteristics. Because in the exchange of products, the valuation of themselves operates with the goal of that there is nobody losing nor earning more than the other party[7]. Furthermore, there was no division of labour as we understand it today due to the small size of these primitive communities and to the roaming of their economic activity: "Technical knowledge —excluding medicinal and/or mystical knowledge— was learned as part of the socialization process and they were not usually controlled by specialists who later exploited them for their own interests" (Lisón 1999, 183). At the time, when humanity was organized in hunter-gatherer communities, the organization of the division of labour was supposed to be an extension of family matters, with a 'pater familias' firmly in charge of the rest of the members who were undoubtedly closely related to each other (Gardiner 2004, 121). The different members of a group might specialize in different tasks, but shared their goods and services through an economy of favors and obligations: "A piece of meat that was offered for free would carry with it the assumption of reciprocity: medical assistance, say" (Harari 2015, 1197). Bartering was totally meaningless in communities where there was no division of labour and in which the principles of reciprocity and community predominated.

However, with the gradual establishment of the division of labour and, consequently, of the social classes, the panorama changed: "early success in these activities [technological advances in agriculture] allowed the creation of a small and probably irregular economic surplus which made it possible to release some labour from direct production. But it was a thousand years from the dawn of agriculture to the first evidence of inequality" (Henry 2004, 84). The differentiation of work began to develop —although, at first it was social rather than individual, with a group of families specialized in a function— and that made the collective rights and obligations of the tribe to begin to collapse, the inequality increased until finally a ruling class emerged (Wray 2004, 229-230).

Those groups that managed to acquire greater economic power and influence began to be able to establish bonds of authority and superiority with respect to the rest of the groups in areas that transcended the imposition of obligations for special cases, unlike it had been the case until then. And as these kinds of obligations became increasingly numerous, there was greater need for the institutions dominated by the most powerful classes —namely, religion and government— to regulate them. This is tested by the evidence found in the archaeological findings of Mesopotamian civilizations: "the surviving records of an early agricultural/industrial society, that of Bronze Age Mesopotamia, show an organisation of economic activity very tightly regulated by the state, or by the local temple, which in turn was controlled by elite local families" (Gardiner 2004, 129).

Henry (2004) illustrates very well this gradual transformation of society referring to the history of Egypt.

Back in the third millennium before our era, technical innovations were developed in

[7] To deepen into the differences between a community in which exchange prevails and another one in which hospitality prevails, see Bell and Henry (2001) and to examine the controversy over possible exchanges in tribal societies see Wray (1990).

the field of agriculture and in the vicinity of the Nile River, which caused important changes in tribal societies. The use of these technical innovations required know-how and training, so it was not possible or efficient for all inhabitants to take turns in these activities. As consequence, only part of the tribe was formed and specialized in the most sophisticated agricultural work, which went beyond what this small communities needed. These specialists had not only the task of working the land with advanced techniques, but also that one of managing the fruits in favour of the rest of the population, which gave them a power that no other member of the community had, especially considering the enormous dependence that primitive communities had on agriculture.

In addition, the sphere of influence of these groups was not limited to their original tribes. To properly apply the new agricultural techniques and achieve enough production, it was necessary to regulate the flow of the Nile River, something that could not be achieved solely by the corresponding region of the tribe. After all, the agricultural activity of one tribe could affect a lower one down by the river of the same valley, either by depriving it of sufficient water in times of drought or the opposite in times of floods. That is why it is clear that the valley of the Nile River would have to be sooner or later under the control of some supra-tribal entity. And this control was accomplished by the mentioned group of engineers-administrators because they were the only ones who had the necessary knowledge to apply advanced agricultural techniques and to manage their products.

That is the reason why this social group went on —during the course of many years— to take charge of the management of many communities´ resources and not only those of their own. The members of this privileged group, coming from a tribal organization in which egalitarian relationships were practiced within the community, saw themselves detached from any tribe since they were now responsible for the welfare of various populations. Their jobs ended up separating them from the tribe not only in physical terms, but also in social terms.

But how did this group achieve this gradual but important increase in economic and political power and at the same time maintained social harmony? The answer is simple: religion. These specialists astutely managed to entwine the old tribal customs that were carried out through rituals and magical practices so that they did not to confront the forces of nature against the economic order that was being formed around agricultural production. Hydraulic engineers subverted the essence of magic rituals but maintained the format of the magic to elevate certain people to a position of authority that was in tune with nature. The figure of highest rank within that hierarchy would finally be that one of the Pharaoh. A person that had been chosen and approved by the gods and who will join them after his death. The functions of the Pharaohs were to contact the deities through all kinds of rituals to maintain the normal running of the world — the regular changes of seasons and the return of the floods to the Nile so that the crops provided enough food— and, at the same time, to guarantee security against the forces of nature and the external enemy.

Enjoying all these advantages did not come free: the communities had to pay a tribute to the religious groups in charge of maintaining natural order. The economic unit taxed was not the individual but the entire town. The kings and priests did not assign an arbitrarily level to the tax rate to be paid by the people, but the scribes and collectors met with the authorities of each community to negotiate the amount. Consequently, and gradually over the centuries, these groups of administrative engineers could increase their income above the average income of their communities, which allowed them to strengthen the system that privileged their situation. Here we see the formation of a class society with religion as a unifying force and with the ruling class extracting economic surplus from the majority.

With what exactly did these communities pay to the powerful classes? With all kinds of goods and services ranging from manufactured products to the workforce itself. No commodity or currency was delivered —the minting of coins will not take place until more than 2,000 years later, in the seventh century before our era—. The communities paid the tribute with their physical or intellectual effort through different forms, and, as it has been proven thanks to a few contracts that have survived, these payments were recorded through a unit of account called "*deben*", which it was no more than a unit of weight —initially equivalent to 92 grams of wheat—. That is, the "*deben*" was money, a simple unit of account to measure obligations.

The formation of class society meant that the obligations for special cases typical of primitive societies evolved into tax obligations that were owed to the privileged class represented by the government and the clergy (Peacock 2003-4; Eagleton and Williams 2007, 17).

The "*deben*" were not placed on hands because they were not an object nor linked to one; they were simply an abstract unit for measuring the payment of taxes and administrative transactions that took place on the ground of temples. After all, the growing complexities of the new economic structure required the inclusion of a unit of account in which taxes and their payment could be counted. And the scribes of the temples were the responsible for creating price lists and managing the accounts in the decreed account unit —the "*deben*"—. Henry (2004, 92) concludes:

> money does not originate as a medium of exchange but as a unit of account […] where the measure of value is arbitrarily specified by decree, and goods and services of various qualities and quantities can then be assigned a monetary value to allow a reasonable form of bookkeeping to keep track of tax obligations and payments

The exposition leaves no room for doubt: "the development of money in the third millennium (1) is placed squarely in the transition from egalitarian to stratified society, (2) is intertwined with the religious character of early Egypt, and (3) represents a fundamental change in the substance of social obligations between tribal and class societies "(Henry 2004, 80). And this development is political and administrative, totally unrelated to the functioning of the market. In fact, "the Egyptians had no vocabulary for buying, selling, or even money; there was no conception of trading at a profit" (Bleiberg 1996, 14).

According to this explanation we could affirm, as Wray (2004, 230) does: "if Henry is right, specialisation begat wisdom, begat status, begat religion, begat fines, fees, tribute, tithes and taxes paid to the Papacy".

7. Temples and palaces in Mesopotamia

The unit of account that Egyptians used in temples to regulate debts and transactions —that is, money— was referenced to wheat. Archaeological evidence shows that in Mesopotamia the analogous form of unit of account used in temples referred to barley, after all another cereal (Harari 2015, 204; Powell, 1996). Seemingly none other unit of account but this one was chosen because in the existing agroindustry of subsistence agriculture the cereal was the most important and used product of all.

But the fact that the unit of account used to measure the tributes and all the economic relations that took place in the temple was the cereal grain does not mean that grain was used in all those transactions, the grain was simply the unit of reference to pay debts and to exchange goods and services. As it is evidenced by the fact that, for some workers in Mesopotamia, the monthly salary expressed in barley far exceeded the amount of barley that they could eat during that period: "One *sila* was equivalent to approximately one liter of barley. A worker earned 60 *silas* a month and a worker 30 *silas*. A foreman could earn between 1,200 and 5,000 *silas*. Not even the hungriest foremen could eat 5,000 liters of barley in a month, but he could use the *silas* he did not eat to buy all kinds of items "(Harari 2015, 204). It is important to understand that it is not that this worker received all that great amount of grain and then exchanged it for other products, but that once his inputs were recorded in terms of cereal grains, he could obtain other products simply subtracting from his salary the quantity of barley that he needed. The worker did not have to receive the barley grains to obtain other products or to settle his tax obligations, since those were only the unit of account in which the price of the rest of the products and the value of the debts were expressed.

And where were these records of obligations of the agents involved recorded? On any object that supports those annotations. There is abundant archaeological evidence supporting the fact that the inhabitants of Mesopotamia created permanent records on an indestructible material, the clay, since it "enhances infinitely the chances of worthwhile records surviving" (Gardiner 2004, 135). In these tables were written down notches that represented the amounts of units of account that were owed and to be received by the agents involved (Eagleton and Williams 2007, 17). This is how a system for recording and storing accounting data began to be developed (Harari 2015, 141; Schmandt-Besserat 1992; Nissen et al. 1993; Englund 2004). The Babylonian clay tablets (*shubati*) of around the year 2,500 BC were

"the recognition of indebtedness measured in an account money" (Innes 1913, 396).

Therefore it turns out that the first texts of history "are boring economic documents that record the payment of taxes, the accumulation of debts and the possession of property" (Harari 2015, 142). An example of these first messages found is: "a total of 29,086 measurements of barley were received over 37 months. Signed, Kushim" (Robinson 1995, 36). To avoid the manipulation of these clay handwritten tables they were put into crates in which the most important information was repeated, in such a way as in order to know all the details the casing had to be broken, something that —with a view to avoid falsification or alteration of the table— was only done when the definitive agreement was reached (Innes 1993, 395-6; Wray 2015, 155; Tcherneva 2016, 14).

But the civilizations of the Middle East were not the only ones that used writing to measure credits and debts. On the other side of the planet and without having contact with the civilizations of Europe, Africa and Asia; the Incas also began to write down data related to the collection of taxes and the possession of property (Ascher 1981).

In any case, the novelty was not the registration of commitments and obligations, which had been happening in primitive societies for some time, but their articulation and regulation through the authorities of the temples in the context of a society of classes in which such obligations were much more numerous and complex. The annotation of commitments and debts is much earlier: authors such as Gardiner (2004, 150) situate this phenomenon 10,000 years ago. Others, such as George Ifrah (1994), go back to the ancient Stone Age, pointing out that only the invention of fire is a technological innovation prior to accounting. In some settlements of hunter-gatherers there were bones with very elaborate notches that survived and which are understood by some scholars as evidence of a fairly sophisticated accounting method (Gardiner 2004, 131). All of this proves that, after all, money predates writing as it arose to measure credits and debts.

The novelty in the case of Mesopotamia was of a cognitive and symbolic nature. The tables were typical of a stratified society, created by a privileged social group to be recognized and to be used by the rest of the population that interacted with the temples —the laws and codes of conduct created from the temples did not affect the whole society, they were limited to the public sector and the part of the economy that was in connection with it. At the same time, the emergence of these clay tables was an important and necessary step towards the systematization of the records of economic relations that were becoming more extensive and complex: "The conceptual leap was to endow each token shape [...] with a specific meaning" (Schmandt-Besserat 1992, 161). The marks used in the past could not be understood outside the context in which they were recorded. The opposite was true for the Mesopotamian plates, whose meanings could be immediately understood by any person who was familiar with the system established by the temple authorities. The users of these tables could "manipulate information concerning different categories of items, resulting in a complexity of data processing never reached previously" (Schmandt-Besserat 1992, 161). Over time, the increase in the number and types of obligations to be recorded led the system to become more complex, incorporating new brands that in turn represented a specific number of tables (Henry 2004, 94).

Thus, a general scheme of price equivalences, which worked with weights and measures was created. A system of interconnected elements that coordinated the resource flows and allowed to articulate the debts that were owed to the public institutions. The production of tables and its administration, associated with the system of tributes that had supplanted the old tribal obligations, became the activity of the temples (Henry 2004, 94). Under normal conditions, the old tribal way of allocating price would have been replicated in many of the rest of the transactions that took place in the economy (Wray 2004, 9).

This accounting method was necessary to manage a complex administrative hierarchy: "Barley and dates produced on land leased out by the temples were distributed as rations to non-agricultural labour employed in their workshops to weave cloth from the wool produced by the herds with which these institutions were endowed" (Hudson 2004, 112). These payments did not have a fixed date in the calendar, but they made to coincide with the time of harvest. Those who received the payment were obviously the temples but also the officials of the bureaucracy who had given loans to individuals with problems (Hudson 2004, 116).

All payment obligations as well as its cancellations had to be duly accounted for in order to make the distributive system to work correctly. A good organization was essential to coordinate all economic relations: "The temples were the main instrument to supervise this cooperation, and they also became the instruments of industrial development." (Gardiner 2004, 135).

The temples had not only imposed the moral code that made enforceable obligations and maintained the social peace thus allowing the system to work, not only had they developed the writing to register the accounts, but they also became industrial poles and "In Mesopotamia temples employed the poor, the widows and the orphans in factories which produced textiles to be traded abroad for the commodities the region lacked, including silver, copper, tin and lead. They were, it seems, the major business centres" (Gardiner 2004, 135).

8. Silver

Using cereals as a reference unit to measure the prices of other products and services had a significant problem: the yield of cereal crop varied drastically year after year, which affected their value in relation to the one of other products. Ideally, the value of the product that is used as a reference does not easily vary in terms of other objects, thus, this units of reference were not useful to meet that condition in comparison with other products that are permanent and that, by convention, can have an established value. Or to look at it from another perspective: when deciding to use a product as a measure of value is desirable that its intrinsic value is lower than its value as a mean of exchange, so that the latter is affected, as little as possible, by the demand and supply of the exchange good that takes place because of its intrinsic value. Thus, a commodity which we need to feed ourselves like cereal is not a good idea, since its use value for feeding could be very far from its value as a unit of measure. Obviously, the same cannot be said of silver and gold since they are not life needs (Gardiner 2004, 133; Powell, 1996).

There is no need of a real product that represents the unit of account of obligations and debts, because at the end, these are fictions and their management does not need physical embodiment. But at a time where not even a precise and manageable numbering system had yet been developed, everything seemed easier if those fictions could be correlated to something physical. It was more useful and practical to have a physical commodity to be traded, accounted, watched, known, beautiful and transportable with which to facilitate the creation and settlement of debts and credits (Harari 2015, 205). Archaeologists are still unclear about why silver was chosen (Hudson and Wunsch 2004, 351) although it is speculated that it was because it played a central role in the gift system of palaces and temples and because it was on top of the pyramid of materials from a cultural perspective —silver was transformed into jewels, crowns and other symbols of power— (Hudson 2004, 123; Harari 2015, 205; Eagleton and Williams 2007, 19). In any case, what it is clear is that "The most popular medium of exchange for the last 5,000 years has been silver, or, to be more accurate, a promise to provide a quantity of silver, measured by weight" (Gardiner 2004, 134).

But how was the cereal replaced by the silver as a unit of account? The most solid theory points out to the activity of the merchants of the time. Merchants who should not be understood from a current perspective, as individuals who freely decide to trade, to do business: "the merchants in Bronze Age society were not completely free agents, but appear to have been a body of people authorised by the state or temple to undertake some specific trading on behalf of the community" (Gardiner 2004, 129). In fact, the word "merchant" (*tamkarum*) appears as an official title, not simply a freely chosen activity that anyone could take when it suited him (Gardiner 2004, 129).

Contrary to what the proponents of the money-commodity approach suppose, massive public institutions were essential to organize trade. Long distance trade was promoted from the temples, whose leaders were interested in capturing precious metals and other raw materials from abroad to be able to incorporate them into their economic circuit. Existing records reveal that Babylonian merchants accepted clothing advances from the temple workshops in return for a promise of supplying a fixed amount of silver later on. From the temples, the merchants got documents that were nothing more than promises of payment to those who held them. The British Museum in London retains more than 600 records of this type (Hudson 2004, 124; Gardiner 2004, 135-

6). Likewise, everything suggests that these documents and the rights they enclosed could be transferred and therefore used in exchange for other products:

> Promissory notes which do not mention the creditor by name, but refer to him as *tamkarum*, "the merchant/creditor". In a few cases such notes at the end add the phrase "the bearer of this tablet is *tamkarum*" (*wabil tuppim sut tamkarum*). This clause suggests the possibility of a transfer of debt-notes and of ceding claims, which would make it a precursor of later "bearer cheques". Klaas Veenhof (1999)

Most of these first known records were created in public institutions over 3,500 years ago. However, it does not mean that this kind of promises were not created outside the temples, what happens is that they may simply have not been preserved (Eagleton and Williams 2007, 21). After all, the temples and palaces "did not pursue cost containment: the bureaucrats' main concern was doubtless to protect themselves from accusations of embezzlement" (Gardiner 2004, 129), which is why the record of these promises was so solid and has survived until today.

Silver came through these trade flows and thus circulated through the economy. At first it worked as a measure and as deposit of value, especially to denominate debts, starting with those of which the temples were creditors. In this way, silver was replacing the vehicular role that barley had played until then by assigning values to internal resource flows and to debts owed by merchants and other individuals related to the temples and palaces. These prices were an intrinsic part of the system of weights and measures, with the heavy silver designated as the common denominator, and being also the reservation of sanctified value. In view of the fact that the main flows of resources within public institutions were fees to feed the dependency of creditors´ labour, and that the principal payments of the communities to the palace consisted of crops; silver became comparable to barley. The idea was to manage the prices of the essential transactions with which the various departments of the temples and palaces interacted between each other and with the economy in general: the value of the crops, the rents, the tariffs and the purchases of basic products (Hudson 2004, 111-115).

The accounting prices, as well as the fines and obligations, continued to be added to the resources of the massive institutions, but this time expressed in relation to the weight of silver: "Setting the value of a unit of silver as equal to the monthly barley ration and land-unit crop yield enabled it to become the standard measure of value and means of payment, although barley and a few other essentials could be used as proxies as their proportions were fixed" (Wray 2004, 9).

Despite starting as a measure and a deposit of value, as time goes by, silver was used as a personal tradable asset for exchange. The main way for most families to make money with silver was, evidently, selling the surplus produced on their own land or on the land leased to public institutions. However, the transactions were made through the accumulation and cancellation of debt balances, so truly the silver was not being entirely used as a means of payment: silver was being used as a means to settle debts, mainly with the large institutions and its collectors. In fact, in small sales such as the beer service, the common practice was not to pay instantly but to write down the debt, as it is done in many bars today (Hudson 2004, 114-115).

In any case, what is clear and important to note is that the use of silver as a means of change derived from its main and original function as unit of account. It was through a process planned and designed in temples and palaces, that silver started to be used to carry out transactions in the private sphere. Indeed, the fact that the silver was backed by public institutions was what gave people confidence when carrying out the exchanges, since it would always serve to pay off the debts owed to the temples and palaces (Hudson 2004, 115).

9. General-purpose money

All the social and political phenomena described so far explain how the primitive money that was exceptionally used in prehistoric communities was evolving. The money used in class societies such as the Egyptian or the Mesopotamian one was no longer just useful to measure a few specific obligations, it also was desirable to articulate many obligations and transactions that occurred in much larger and more complex economies in which interactions among many more agents took place. As we have seen, this transformation was due to the emergence of class society, to the im-

position of payment obligations on the entire population, and to the development of temples and palaces as administrative, industrial and commercial centres. But what finally allowed money to be widely used beyond the administrative centres was the monetization of the obligations that were managed in those spaces. This last phenomenon is what explains that primitive money finally became "general-purpose money": "it is the extensive transferability of debt and the creation of a hierarchy of acceptability that was crucially important in the development of the form of (circulating) credit money" (Ingham 2004, 185).

It is important to bear in mind that although credit —and therefore its counterpart, debt— binds two parties through a payment commitment, the token —the physical object that can be used to represent its existence— can be transferred to third parties and even circulate throughout the economy. In this way it is possible for many credits to be created and liquidated, thanks to the same token. For example, the first clay tablets that represented the obligations that were imposed on the population were not interchangeable in the community, but linked only to the debtor, they were not useful for anyone else. However, silver could circulate from hand to hand representing many different credits —and debts—. In the first case we speak of a "monetary instrument" and in the second case of a "monetary object" (Wray and Tymoigne 2005, 5). The monetary instrument represents a debt in particular, and the monetary object can represent many more. The process of converting a monetary instrument into a monetary object —that is, of converting a debt into means of exchange— can be called "monetizing debt" (Gardiner 2004, 168-9; Ingham 2004, 185).

In the words of Ingham: "money, even in its virtual form as a book entry, only becomes an exchangeable 'commodity' after its quality of 'moneyness' has been constituted by the social relations between the issuers and users of money" (Ingham 2004, 179). That is why money always means credit, although credit is not always money. Tribal obligations did not become money because of its general use, neither did so the first Mesopotamian clay tables. But the silver measured in weight was used like general-purpose money: it was a "token" that served to pay the tributes to the temples but that could be changed hands to create and to settle obligations between different economic agents. Despite the existence of primitive money, only the money originated through the internal accounting practices of the temples and palaces generated a general-purpose account money with which denominate prices, although other traditions could have developed the idea of money for special purposes and for measuring debts (Ingham 2004, 185; Wray 2004, 229; Innes 1913, 392).

This conception implies a drastic change with respect to the individualistic perspective of money as a commodity. Money was not a technological innovation that emerged in a decentralized manner and under the heat of market forces to overcome the impediments of barter. It was a social and centralized construct and it is a complex social practice that carries power and class relations, socially constructed meanings, abstract representations of social value, etc (Wray 2004, 231; Harari 2016, 203). Without the existence of the monetary mechanisms created, imposed, regulated and supervised by the authorities, it would have been very difficult that transactions took place in a generalized manner. The silver was used to articulate all kinds of economic relations because, ultimately, the authorities accepted it as tax payment. That is why the money and the law go hand in hand forming the basic elements of economic progress and that is why, only with a few and rare exceptions, every unit of account used throughout history and in every corner of the globe has been associated to a central authority (Gardiner 2004, 130; Wray and Tymoigne 2005, 4; Wray 2010, 45).

The transformation of primitive money into general-purpose money entails a constant transformation of creditors and debtors. In the case of the first clay tables, the community was the debtor which had to pay tribute to the temples and palaces, to the creditors. But in the case of general-purpose money, the "tokens" such as silver were used to allow the exchange of all kinds of services and goods and therefore any person in possession of them would be entitled by the entire community. The individual who owned the silver was not the creditor of any specific person or institution, but was recognized as a creditor by anyone who provided him with goods in exchange for his silver. Anyone as the representative of the debtor who accepted the silver in payment for what he had offered (Gardiner 2004, 147).

That is, when the record of a commitment is regulated and generalized in a community in

a way that allows the use of it to obtain goods and services, one could say that the holders of these cards hold the title of creditors in front of the community, while the community holds the title of debtor in front of them. These tokens that the seller receives for his supply "are the measure of the credit he has given to the purchaser, and, more widely, they reflect the debt society as a whole owes him" (Gardiner 2004, 147). In a similar way the sociologist Georg Simmel explained, at the beginning of the 20th century: "Money is only a claim upon society. [...] The liquidation of the individual's liability may still involve an obligation for the community. The liquidation of every private obligation by money means that the community now assumes this obligation to the creditor" (Simmel 1907, 177). In other words, "money is simply the right to demand a good or a service from another person" (Macleod 1889, 67).

Consequently, from the money-debt approach, the sale is conceived in a way far from the conventional one: "a sale, according to this theory, is not the exchange of a commodity far some intermediate commodity called the 'medium of exchange,' but the exchange of a commodity for a credit." (Innes 1913, 391). When a person wants to sell something he is not looking for coins, gold or silver, what he is looking for is to obtain credit, that is, the recognition that he should be provided with value in the future and in some way. The sellers do not want to treasure monetary objects, what they want is to gather credit, which is what helps them to acquire products, pay taxes, or enjoy a service: "A credit cancels a debt; this is the primitive law of commerce. By sale a credit is acquired, by purchase a debt is created. Purchases, therefore, are paid for by sales. The object of commerce is the acquisition of credits" (Innes 1914, 168).

The instrument or the monetary object used is irrelevant; it is only a credit and debt thermometer that facilitates transactions, just as the important thing is not the measuring tape but the distance to be measured. The relevant issue is the unit of account, which is a measure of the value of the goods, "but is not itself a commodity, nor can it be embodied in any commodity. It is intangible, immaterial, abstract. It is a measure in terms of credit and debt" (Innes 1914, 159). When we 'promise to pay' we do not commit to pay with silver or with other monetary objects, but we simply commit ourselves to cancel our debt by an equivalent credit expressed in terms of our abstract and intangible standards (Innes 1914, 155).

10. Conclusions

The misunderstanding of the nature of money —to believe that it is or it has to be referenced in a commodity when it is nothing more than a fiction to measure social commitments and obligations— and the erroneous but tentative extrapolation of the behaviours of ancient communities to modern economic practices were ennobled by the money-commodity approach, even though the archaeological remains, the cuneiform writing and the numismatic studies point out to a very different direction. That direction is much better addressed by the money-debt approach, which offers a much more plausible and accurate explanation of the origin of money.

Instead of assuming that money appears to optimize the barter that took place between free individuals, the unorthodox focus of money-debt shows us that money, being a unit of account to measure obligations and not a physical object that facilitated the exchange, was born in the first place, with the imposition of certain penalizations and in prehistoric societies in which there were no exchanges. Which evidences its social nature and what distances it from the commercial and individualistic dimension.

With the appearance of class society, that primitive money only useful to measure certain tribal obligations, evolved to become a general-purpose money. Money was originally created more than 5,000 years ago, long before the minting of the first currency, by the bureaucrats of public institutions in Egypt and Mesopotamia in order to account for the rights enjoyed by the rest of the population and to manage the administrative transactions of a distributive nature that took place within the institutions. This way it was created in the temples and palaces —which were not only administrative and religious centres but also industrial and commercial ones— a system of weights, measures and prices that served as a reference for the rest of the economy. Since money was a unit of account, it did not have to have a corporeal existence, but to facilitate economic relations at a time in which the knowledge about accounting was very poor and its operations

complicated, money made reference to physical objects such as cereal or silver, a fact that in a generalized way led to confuse the concept of money with the material itself used simply to facilitate the measurement of transactions.

The money of general use existed 2,000 years before the first coins were created and it was not born to facilitate the barter, but rather it was born in a not-mercantilist economy with the objective of measuring the debts that the population owed to the temples and palaces. Its origin was not driven by market forces in a decentralized manner but planned by public authorities of redistributive centres. The same happened with the division of labour and the location of the labour product, since they were established through centralized decisions, not by the forces of free trade. Markets were also created, managed and nurtured by a central authority: the prices were not the result of the interaction of supply and demand but they were set by the bureaucrats of the temple and then transmitted to the rest of the economy.

With this work it should be clear that the heterodox vision of the origin of money enjoys greater theoretical solidity and empirical support than the traditional one, despite having less popularity. This work humbly tries to compensate for this balance of popularity, with the hope that it can contribute to improve future analysis related to the origin and nature of money.

Bibliography

Ascher, Marcia and Robert 1981. *Mathematics of the Incas. Code of the Quipu*. Dover, Nueva York.

Bell, Stephanie 2001. "The role of the state and the hierarchy of money". In *Cambridge Journal of Economic*, 25, 149-163.

Bell, Stephanie and Henry, John 2001. "The Limits of Monetary Economies". *Review of Social Economy*, 2(59), 203-226.

Bleiberg, Edward 1996. *The Official Gift in Egypt*. Norman, OK: University of Oklahoma Press.

Desan, Christine 2013. Creation Stories: Myths About the Origins of Money. *Harvard Public Law* Working Paper 13-20.

Ellis, Howard 1934. *German Monetary Theory 1905-1933*. Cambridge, MA: Harvard University Press.

Fontana, Giuseppe and Realfonzo, Riccardo (eds) 2005. The Monetary Theory of Production: Tradition and Perspectives. New York: Palgrave Macmillan.

Friedman, Milton 1969. *The optimum quantity of money and other essays*. Aldine Pub, Chicago.

Gardiner, Geoffrey W. 2004. "The Primacy of Trade Debts in the Development of Money". In L. Randall Wray (ed.). *Credit and State Theories of Money*. Cheltenham: Edward Elgar, 128-172.

Garrote, José Carlos 2017. *Reflexiones sobre el origen y la naturaleza del dinero. El dinero moderno como una extensión del dinero primitivo*. Trabajo Final de Grado. Universidad de Extremadura.

Glyn Davies 1994. *A History of Money: from Ancient Times to the Present Day*. Cardiff. University of Wales Press.

Goodhart, Charles 1998. "The two concepts of money: implications for the analysis of optimal currency areas". *European Journal of Political Economy*, 14, 407-32.

Graeber, David 2011. *Debt: The First 5,000 years*. Melville House, Nueva York.

Graeber, David 2011b. "What is Debt? – An Interview with Economic Anthropologist David Graeber". In *Naked Capitalism*, August.

Graziani, Augusto 2003. *The Monetary Theory of Production*. New York: Cambridge University Press

Graeber, David 2014. *En Deuda*. *Una historia alternativa de la economía*. Barcelona: Ariel.

Grierson, Philip 1977. *The Origins of Money*. London: The Athlone Press.

Harari, Yuval Noah 2015. *Sapiens*. Barcelona: Debate.

Henry, John F. 2004. "The Social Origins of Money: The Case of Egypt". In L. Randall Wray (ed.). *Credit and State Theories of Money*. Cheltenham: Edward Elgar, 79-98.

Hudson, Michael 2004. "The Archaeology of Money: Debt versus Barter". In L. Randall Wray (ed.). *Credit and State Theories of Money*. Cheltenham: Edward Elgar, 99-127.

Hudson, Michael and Wunsch, Cornelia 2004. *Creating Economic Order*. Bethesda: CDL Press.

Humphrey, Caroline 1985. "Barter and Economic Disintegration". Man, *New Series* 20(1): 48–72.

Ifrah, Georges 1994. *The Universal History of Numbers*. London: The Harvill Press.

Ingham, Geoffrey 2004. "The Emergence of Capitalist Credit Money". In L. Randall Wray (ed.). *Credit and State Theories of Money*. Cheltenham: Edward Elgar, 173-222.

Ingham, Geoffrey 2004b. The nature of money, Economic Sociology: *European Electronic Newsletter*, ISSN 1871-3351, Vol. 5, Iss. 2, pp. 18-28.

Innes, A. Mitchell [1913] 2004. "What is money". En L. Randall Wray (ed.). *Credit and State Theories of Money*. Cheltenham: Edward Elgar, 14-49.

Innes, A. Mitchell [1914] 2004. "The Credit Theory of Money". In L. Randall Wray (ed.). *Credit and State Theories of Money*. Cheltenham: Edward Elgar, 50-78.

Kiyotaki, Nobuhiro and Wright, Randall 1989. "On money as a medium of Exchange". *Journal of Political economy*, 97(4), 927-954.

Kottak, C. 1994. *Antropología*. Madrid: McGraw-Hill.

Lavoie, Marc, Rochon, Louis-Philippe and Seccareccia, Mario 2009. *Money and Macrodynamics: Alfred Eichner and Post-Keynesian Economics.* New York: M. E. Sharpe.

Lisón Arcal, J. 1999. El mito del trueque. *Sociedad y utopia, Revista de ciencias sociales*, No. extra, pp. 181-187.

Louzek, M. 2011. "The battle of methods in economics. The classical Methodenstreit – Menger vs. Schmoller". *American Journal of Economics and Sociology* 70(2), 439-463.

Macleod, Henry Dunning [1889] 1969. *The theory of Credit*, vol. 1, Rome: Edizioni Bizzarri.

Menger, Carl 1892. "On the Origin of Money". *The Economic Journal*, II, No. 6, 239-255.

Menger, Carl [1909] 2013. *El dinero*. Madrid: Unión Editorial.

Mitchell, William, Wray, L. Randall and Watts, Martin 2016. *Modern Monetary Theory and Practice. An Introductory Text*. Centre of Full Employment and Equity, The University of Newcastle, Callaghan.

Nissen, Hansen J., Peter Damerow, and Robert K. Englund. 1993. *Archaic Bookkeeping: Writing and Techniques of Economic Administration in the Ancient near East*. Chicago: Chicago University Press.

Parguez, Alain and Seccareccia, Mario 2000. The credit theory of money: the monetary circuit approach. In *What is Money?* (John Smithin ed.) London: Routledge.

Peacock, Mark S. 2004. State, Money, Catallaxy: underlaboring for a chartalist theory of money". *Journal of Post Keynesian Economics*, vol. 26, no. 2, Winter, pp. 205-225.

Peter G. Klein and George Selgin 2000. Menger's Theory of Money: Some Experimental Evidence. In *What is Money?* (John Smithin ed.) London: Routledge.

Polanyi, Karl 1957. "The Semantics of Money-Uses". In *Primitive, Archaic and Modern Economies* (Dalton, G. ed. 1968), 175-203. Boston: Beacon Press.

Powell, Marvin 1996. "Money in Mesopotamia". *Journal of the Economic and Social History of the Orient*, 39 3, pp. 224-242.

Rallo, J. Ramón 2017. *Contra la Teoría Monetaria Moderna*. Barcelona: Deusto.

Robinson, Andrew 1995. *The Story of Writing*. New York: Thames and Husdon.

Samuelson, Paul and William D. Nordhaus 1975. *Economics*, 274-76.

Schmandt-Besserat Denise 1992. *Before Writing, Volume One: From Counting to Cuneiform*. Texas: Austin, University of Texas Press.

Simmel, G. [1907] 1978. *The Philosophy of Money*. Routledge (1978).

Smithin, John (ed.). 2000. *What is Money?* London: Routledge.

Smith, Adam 1994. *La riqueza de las naciones*. Madrid: Alianza editorial.

Tcherneva, Pavlina 2016. "Money, Power and Monetary Regimes". In *Levy Economics Institute*, Working Paper No 861.

Tooke, Thomas 1844. *An Inquiry into the Currency Principle*. Longman, Brown, Green and Longmans.

Veenhof, Klaas R. 1999. "Silver and Credit in Old Assyrian Trade". In Dercksen, J. G. ed., *Trade and Finance in Ancient Mesopotamia*, (MOS Studies 1) Leiden: pp. 55-83.

Wray, L. Randall (ed.) 2004. *Credit and State Theories of Money*. Cheltenham: Edward Elgar.

Wray, L. Randall and Éric Tymoigne 2005. "Money; An Alternative Story". *Levy Economics Institute*, Working Paper 45.

Wray, L. Randall 2010. "Alternative Approaches to Money". *Theoretical Inquiries in Law* 11 (1) pp. 29-49.

Wray, L. Randall 2015. *Teoría Monetaria Moderna*. Madrid: Lola Books.